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DEPARTMENT OF COMMERCE

UNITED STATES BUREAU OF MINES
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THE PARAMOUNT ISSUE

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DEPARTMENT OF COMMERCE - BUREAU OF MINES

THE PARAMOUNT ISSUE[1]

By W. D. Ryan[2]

The American public has at all times been prone to discuss important questions that call for consideration and adjustment. Debatable subjects upon which sides may be taken always receive unusual prominence, but other questions equally important may be neglected. The real "paramount issue," calling for remedial action, is the ever-increasing number of deaths caused by preventable accidents.

This matter demands the attention of the entire American people; the importance of accident prevention can not be overemphasized, and in many phases of American life, especially among the mining and allied industries, far too little real attention has been given the importance of conserving life and limb by accident prevention.

ACCIDENTS COMPARED TO WAR AS A CAUSE OF DEATH

Harry T. Hoffman, Wyoming labor commissioner, writes the following:

> It is one of the peculiar complexes of this rapidly moving age that we all stand aghast at the horrors of war and view with apparent indifference the greater havoc of industrial peace. Did you ever stop to think that approximately twice as many people were killed by accidents in the United States in 1929, as there were American soldiers killed in the entire period of the World War?
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> Every employer and every worker should be thoroughly aroused over the tremendous toll levied against industrial forces by accidents which are largely preventable and develop a faith in safety efforts that will fire them with a zeal as pronounced as that of their religion or their patriotism.
>
> Let us remember safety-first to the end that the workman shall live to enjoy the fruits of his labor; that his mother shall have the comfort of his arm in her age; that his wife shall not be untimely a widow; that his children shall have a father; that cripples and helpless wrecks who were strong men shall no longer be a by-product of industry.

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[1] The Bureau of Mines will welcome reprinting of this paper, provided the following footnote acknowledgment is used: "Reprinted from U. S. Bureau of Mines Information Circular 6428."

[2] U. S. Bureau of Mines mine safety commissioner, Kansas City, Mo.

To accomplish this it is necessary that every possible protection be provided for those who toil, and that every one should exercise the greatest care. It should be the workers' constant aim.

ACCIDENTS COMPARED TO DISEASE AS A CAUSE OF DEATH

Accidents are sixth among causes of deaths in the United States, according to figures compiled by the National Safety Council from records of the United States Census Bureau. Other principal death causes are heart disease, tuberculosis, cancer, cerebral hemorrhage, and nephritis.

Among all men, accidents are third as a cause of death, being exceeded only by heart disease and tuberculosis. Among men from 20 to 45 years of age accidents are the second cause of death, being exceeded only by tuberculosis.

For the ages 15 to 19 among men and for 5 to 14 in both sexes accidents cause more deaths than any one disease. For ages under 5, accidental deaths are second only to the so-called diseases of infancy.

It is only after the ages of 45 to 55 that heart disease, cancer, and other diseases become important and cause higher death rates than accidents. Of various classes of accidents, automobile accidents predominate as a cause of death for ages from 3 to 70.

PEOPLE GENERALLY NOT CONSCIOUS OF IMPORTANCE OF ACCIDENT PREVENTION

Accident prevention is not, however, prominent in the public mind because it does not have the dramatic appeal of a purely political question. We receive our impressions of it from single instances and isolated occurrences; and only the student or the searcher for truth knows of its human horror or its economic importance as a whole. It is difficult to focus attention upon it. The attitude of the average individual toward the problem of accident prevention is somewhat similar to his attitude toward death; he is willing to admit, at any time, if he is pressed to do so, that death may be very near, but he thinks and acts always as if it were very remote. Thus any particular individual may not have suffered directly or indirectly from any particular accident. His acquaintance with the subject as a whole may come from reading an account in his daily paper, and he probably views the matter in an impersonal light. He is utterly unconscious of his own nearness to it. He probably does not realize that the cumulative cost of all the accidents happening in the country every year is tremendous and that every individual, although he may never have witnessed an accident, pays his share of the overwhelming price.

ENORMITY OF HUMAN LOSS

If a catastrophe causing the loss of one thousand lives happened on Monday morning in any part of the country the news would be flashed by telegraph and radio throughout the world. If another such accident, involving essentially the same loss of life, happened on Thursday of the same week, the country would be shocked. If another happened the first of the next week and still another the latter part of that week, public attention would be centered upon the unusual happenings and there would be little room in the public press or the public mind for anything else. If these disasters persisted with comparative regularity, the country would soon set about doing something; public attention would crystallize into action, relief would be organized, and effective measures of prevention would be projected.

In effect that is essentially what is happening; the total of all the fatal accidents that happen every week equals approximately two catastrophes with 1,000 persons killed in each. And this happens week after week. There were almost 100,000 fatal accidents in 1929, and apparently even that gruesome record will be exceeded in 1930.

The difficulty of reducing accidents lies in bringing a true conception of the meaning of this enormous human loss to every individual. With the taking of a human life, suddenly and without warning, there is associated the idea of horror, and usually in a fatal accident there are gruesome details that add to this repulsiveness. Any person who has witnessed an accident carries away an impression of this horror. But very few people take the time or trouble to try to form an adequate conception of what this horror would be when multiplied one hundred thousand times. It is something that beggars description and defies comparison.

ENORMITY OF ECONOMIC LOSS

So much for the human loss. What of the economic loss involved? Any attempt to measure this loss will prove that it is almost immeasurable and any results that may be obtained in the way of figures are of relative importance only, in that they may be used for purposes of comparison and possibly to suggest what the actual loss may be.

Economists assert that a definite value may be assigned to each human life, according to its remaining earning capacity and its ability to advance the welfare of the race.

Statisticians of the Metropolitan Life Insurance Co. have prepared the following table, assuming probable future earning of $2,500.00 per year:

Age	Life value
18	$28,654
21	30,818
30	31,038
40	25,795
50	17,510
60	8,400
70	562

It may be contended that these values are too high to assign to live removed by fatal accidents. On the other hand, it is felt that the amount ordinarily used in computing industrial losses - $6,000 - is too low, especiall when consideration is given to the record of verdicts by juries that have been as high as $100,000 on single lives. However, even if this amount, which see pitiably small, is used the life values destroyed by accident every year amoun to $6,000,000,000.

Many of the people killed by accident are not wage earners, but aged people, married women, and young children.

We may eliminate the first class entirely because the actual number cases is so small as not to affect the result materially.

As to married women, even if we do not attribute any economic value to the status of housekeeper we can not deny value to the potentiality of motherhood. Moreover, irrespective of the possibility of future earnings of minor children there is always the possibility of their great future service to humanity.

Who, for instance, could have foretold the contribution of Nancy Hank (Mrs. Thomas Lincoln) to the welfare of the country? Who can describe what th condition of our country to-day would be if Abraham Lincoln had not lived to maturity? What would be our industrial status if Thomas A. Edison had been the victim of a fatal accident in his youth? Little is known of the laws of heredity. Genius may appear among the rich and the poor alike and leadership comes both from the mansion and the cottage. But it is self-evident that a large number of American women and children can not be destroyed indiscriminatel without suffering great loss of future leadership. In fact a single young life can not be destroyed without destroying the possibility of another Lincoln or Edison. This is one realm in which the laws of average and the rules of probability fail.

The value of the human asset generally is well illustrated by a statement made by Charles M. Schwab. When asked what he would do in case his steel properties were destroyed by fire, he replied:

> "I would not even figure those as a loss as ~~they~~ could all be replaced in time, but if some catastrophe should destroy at one stroke the personnel of our organization, I would consider myself a ruined man."

LOSS FROM NONFATAL ACCIDENTS

Added to this burden of fatal accidents is that caused by nonfatal or disabling accidents. It is estimated that there are 10,000,000 such accidents in the country every year and that 240,000,000 days are lost as a result. The actual loss in wages may only be estimated, but if the cost of medical attention and of other direct charges is included, the estimate must reach $1,000,000,000.

Therefore, there is a yearly loss of about $7,000,000,000 directly attributable to accidents. Is this the entire story? By no means.

Assume that among all the people killed by accidents each year only one half are wage earners. Assume further that each such wage earner is survived by two dependents and that the period of dependency in each case continues for five years. It will be admitted that each one of these three assumptions is conservative. That would give at the end of five years 500,000 persons dependent as the result of fatal accidents, and if experience did not improve this total would not decline. In addition, 240,000,000 working days lost through nonfatal accidents means the same as an idleness of 800,000 persons for 300 working days. That gives in all at least 1,300,000 people constantly dependent as the result of accidents. Who supports these dependent people?

It makes little difference whether or not some of these people may be apparently independent by reason of insurance or other savings, and it makes little difference whether contribution is made to indigent persons by the payment of insurance premiums or donations to charitable enterprises; this fact remains, that when the producers who normally, according to the usual expectancies of life, would support these people, are withdrawn by accident the burden of actually supporting them shifts to the producers who remain.

An attempt will not be made to measure what this "cost of support" may be, but it will be sufficient to call attention to the cost of $7,000,000,000 per year. What is the significance of this figure?

It is equal to approximately 7 per cent of the annual income of all the people of the country. A saving of less than 50 per cent of this amount each year would pay all the expenses of the national government or would supply the money necessary to solve many of the national relief problems.

Is it possible to prevent a considerable portion of this tremendous human and economic loss?

Experience gives an unmistakable answer in the affirmative.

Original from THE OHIO STATE UNIVERSITY

ACCIDENTS CAN BE PREVENTED

Reference has been made to the ever-increasing death list caused by preventable accidents. During the past few years there has been an increase when all causes are included. At the same time we find a decrease in industria accidents, the greatest increase coming from automobile traffic.

It is true that 75 per cent of all industrial accidents are preventa This assertion is corroborated by the following records showing accident reduction on railroads of the United States.

Year	Employees		Passengers	
	Killed	Injured	Killed	Injured
1916	2,513	49,121	246	7,152
1917	2,781	52,780	301	7,582
1918	2,928	47,556	471	7,316
1919	1,759	36,601	273	7,456
1920	2,198	47,234	229	7,591
1921	1,137	28,747	205	5,584
1922	1,298	32,434	200	6,153
1923	1,645	39,734	138	5,847
1924	1,246	32,401	149	5,354
1925	1,299	32,484	171	4,952
1926	1,371	34,202	152	4,461
1927	1,238	28,157	88	3,893
1928	1,039	23,779	91	3,463

This decrease has been effected during a period when there has been a very large increase in traffic, so that the actual improvement is much greate than the above table indicates.

The National Cement Association has reduced accidents during the past six years about 75 per cent. Although exact figures are not available, the steel industry shows a material decrease. The coal industry suffered one fatality for every 313,000 tons produced during the year 1929; this in face of the fact that a number of coal companies produced from one to seven million tons wit out a fatality. There is no question that the coal-mining industry lags to a distressing extent in this matter of prevention of accidents in industry.

It is a proved fact that when effective methods of accident preventio are applied material results are practically certain of achievement.

When we consider automobile accidents from which the recent increase in total has come, we find this truth again demonstrated. Most automobile accidents are caused by private pleasure seekers as well as by employed drivers. The person who can be reached by education, supervision, and discipline causes relatively few accidents; the person who is not made conscious of responsibilit at the steering wheel causes many.

Original from THE OHIO STATE UNIVERSITY

In this connection attention is directed to the two outstanding organizations in the United States centering their efforts on safety and accident prevention. These organizations are the National Safety Council and the United States Bureau of Mines; the former covering all industries, including automobile traffic and the latter, mining and kindred industries.

People generally must be taught the significance of this problem of accident prevention. Too much publicity can not be given to make people conscious of the tremendous burdens assumed because of accidents, nor can too much instruction be given in the ways by which accidents can be prevented.

SUMMARY

The importance of accident prevention may be shown by comparing accidents with war and disease as a cause of death and disability and by consideration of the human and economic loss involved. That prevention is possible is proved by results obtained wherever effective measures are undertaken. Why can not the gains made in certain industries be extended to all industries and to the public generally?

Accident prevention overshadows all other issues that are brought to public view from time to time. Especially is this true when there is considered the human wasteage, the intense sorrow, and the suffering incident to this trail of misery, to say nothing of the enormous economic loss that accrues to the nation in all these varied aspects.

The fatal and nonfatal accident records of our country are overshadowing, and are appalling in consequences to the American people; these records should prompt the employers and workers alike to redouble their efforts to enlist the Federal and all State governments to grapple with this national problem in some tangible and effective way; it should be done in such manner that public opinion may be aroused with the result that safety consciousness will be instilled into the minds of every one in such a way as to be impelling and convincing.

An intensified movement of this kind would impress upon individuals in all walks of life the obligation of doing their utmost to eliminate this outstanding and unnecessary sacrifice of human life, as well as the economic consequences resulting therefrom.

Unquestionably if accidents are to be reduced to the lowest possible minimum, the spirit of "chance," which permeates the American people, must be eradicated. As statistics will show, much of our large toll of fatal and nonfatal accidents results from taking chances.

If the Federal and State governments undertake to handle this problem, as they should, with the help of enlightened public opinion, a long stride for human and economic progress will have been taken; and the reward will be bountiful, for the people of the nation will be greatly enriched by the human and economic results accruing from this endeavor, in making accident prevention the "paramount issue."